

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	0	therkorn/xp	USPAT	2003/03/12 10:48
2	BRS	L2	1633	therkorn.xp.	USPAT	2003/03/12 10:48
3	BRS	L3	1688	210/198.2.ccls.	USPAT	2003/03/12 10:48
4	BRS	L4	809	2 and 3	USPAT	2003/03/12 10:48
5	BRS	L5	54690	diol	USPAT	2003/03/12 10:49
6	BRS	L6	41	4 and 5	USPAT	2003/03/12 11:07
7	BRS	L7	140	methoxy near7 ligand	USPAT	2003/03/12 11:08
8	BRS	L8	0	3 and 7	USPAT	2003/03/12 11:08
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11	BRS	L11	13	methoxyl same ligand	USPAT	2003/03/12 11:12
12	BRS	L12	2547	methoxyl	USPAT	2003/03/12 11:13
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14	BRS	L14	102535	methoxy	USPAT	2003/03/12 11:13
15	BRS	L15	66	3 and 14	USPAT	2003/03/12 11:29
16	BRS	L16	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
17	BRS	L17	14	3 and 16	USPAT	2003/03/12 11:31

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	Type	L #	Hits	Search Text	DBs	Time Stamp
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15	BRS	L15	66	3 and 14	USPAT	2003/03/12 11:29
16	BRS	L16	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
17	BRS	L17	14	3 and 16	USPAT	2003/03/12 11:31
18	BRS	L18	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
19	BRS	L19	6	3 and 18	USPAT	2003/03/12 11:39

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17	BRS	L17	14	3 and 16	USPAT	2003/03/12 11:31
18	BRS	L18	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
19	BRS	L19	6	3 and 18	USPAT	2003/03/12 11:39

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1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 6375846 B1	20020423	15
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 6074555 A	20000613	12
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5667692 A	19970916	4
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5043062 A	19910827	10
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7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 3795313 A	19740305	18
8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5045190 A	19910903	15
9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4029583 A	19770614	12

	Title	Current OR	Current XRef
1	Cyanogen bromide-activation of hydroxyls on silica for high pressure affinity chromatography	210/635	210/198.2; 210/502.1; 210/656; 502/401; 502/439
2	Modified chromatographic support materials	210/198.2	210/502.1; 210/635; 210/656; 502/402
3	Method and supports for gel permeation chromatography	210/635	210/198.2; 210/502.1; 210/656
4	High performance affinity chromatography column comprising non-porous, nondisperse polymeric packing material	210/198.2	210/502.1; 210/635; 210/656; 96/101
5	Dual surface porous material	502/401	210/198.2; 210/198.3; 210/656; 252/184; 427/387; 428/405; 428/447; 428/502; 502/402
6	Packaging material for high pressure liquid chromatography and method of making the same	210/198.2	210/502.1; 210/635; 210/656; 428/403; 428/406; 428/407; 502/401; 502/439
7	CHROMATOGRAPHIC PACKING WITH CHEMICALLY BONDED ORGANIC STATIONARY PHASES	210/198.2	502/401
8	Chromatography apparatus	210/198.2	210/502.1; 210/635; 210/656; 502/402; 502/403
9	Chromatographic supports and methods and apparatus for preparing the same	252/184	210/198.2; 210/502.1; 502/402; 502/404; 502/7; 96/101



	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1		Jarrett, Harry Wellington et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		Boos, Karl Siegfried et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		Muller, Egbert	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		Bale, Marsha D. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		Williams, Dwight E. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		Yamamura, Ryuji et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		Kirkland, Joseph J. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		Carbonell, Ruben G. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	210/198.2	Ho Chang, Shung et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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5	US 5110784	<input type="checkbox"/>
6	US 4828695	<input type="checkbox"/>
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8	US 5045190	<input type="checkbox"/>
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5	BRS	L6	41	4 and 5	USPAT	2003/03/12 11:07
6	BRS	L7	140	methoxy near7 ligand	USPAT	2003/03/12 11:08
7	BRS	L8	0	3 and 7	USPAT	2003/03/12 11:08
8	BRS	L9	883	methoxy same ligand	USPAT	2003/03/12 11:09
9	BRS	L10	0	3 and 7	USPAT	2003/03/12 11:09
10	BRS	L11	13	methoxyl same ligand	USPAT	2003/03/12 11:12
11	BRS	L12	2547	methoxyl	USPAT	2003/03/12 11:13
12	BRS	L13	0	3 and 12	USPAT	2003/03/12 11:13
13	BRS	L14	102535	methoxy	USPAT	2003/03/12 11:13
14	BRS	L15	66	3 and 14	USPAT	2003/03/12 11:29
15	BRS	L16	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
16	BRS	L17	14	3 and 16	USPAT	2003/03/12 11:31
17	BRS	L18	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
18	BRS	L19	6	3 and 18	USPAT	2003/03/12 11:39
19	BRS	L3	1688	210/198.2.ccls.	USPAT	2003/03/12 11:44

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4	809	therkorn.xp. and 210/198.2.ccls.	USPAT	2003/03/12 10:48
5	54690	diol	USPAT	2003/03/12 10:49
6	41	(therkorn.xp. and 210/198.2.ccls.) and diol	USPAT	2003/03/12 11:07
7	140	methoxy near7 ligand	USPAT	2003/03/12 11:08
8	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:08
9	883	methoxy same ligand	USPAT	2003/03/12 11:09
10	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:09
11	13	methoxyl same ligand	USPAT	2003/03/12 11:12
12	2547	methoxyl	USPAT	2003/03/12 11:13
13	0	210/198.2.ccls. and methoxyl	USPAT	2003/03/12 11:13
14	102535	methoxy	USPAT	2003/03/12 11:13
15	66	210/198.2.ccls. and methoxy	USPAT	2003/03/12 11:29
16	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
17	14	210/198.2.ccls. and (alkoxy same ligand)	USPAT	2003/03/12 11:31
18	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
19	6	210/198.2.ccls. and ((ethylene adj glycol) same ligand)	USPAT	2003/03/12 11:39
3	1688	210/198.2.ccls.	USPAT	2003/03/12 11:44

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1	0	therkorn/xp	USPAT	2003/03/12 10:48
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8	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:08
9	883	methoxy same ligand	USPAT	2003/03/12 11:09
10	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:09
11	13	methoxyl same ligand	USPAT	2003/03/12 11:12
12	2547	methoxyl	USPAT	2003/03/12 11:13
13	0	210/198.2.ccls. and methoxyl	USPAT	2003/03/12 11:13
14	102535	methoxy	USPAT	2003/03/12 11:13
15	66	210/198.2.ccls. and methoxy	USPAT	2003/03/12 11:29
16	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
17	14	210/198.2.ccls. and (alkoxy same ligand)	USPAT	2003/03/12 11:31
18	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
19	6	210/198.2.ccls. and ((ethylene adj glycol) same ligand)	USPAT	2003/03/12 11:39
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3	BRS	L3	185	1 and 2	USPAT	2003/03/12 15:41
4	BRS	L4	3179	magnet\$6 near bead	USPAT	2003/03/12 15:42
5	BRS	L5	11	2 and 4	USPAT	2003/03/12 15:42

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3	BRS	L3	185	1 and 2	USPAT	2003/03/12 15:41
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5	BRS	L5	11	2 and 4	USPAT	2003/03/12 15:42

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1	416114	magnet\$6	USPAT	2003/03/12 15:40
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3	185	magnet\$6 and 210/198.2.ccls.	USPAT	2003/03/12 15:41
4	3179	magnet\$6 near bead	USPAT	2003/03/12 15:42
5	11	210/198.2.ccls. and (magnet\$6 near bead)	USPAT	2003/03/12 15:42
-	0	therkorn/xp	USPAT	2003/03/12 10:48
-	1633	therkorn.xp.	USPAT	2003/03/12 10:48
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-	54690	diol	USPAT	2003/03/12 10:49
-	41	(therkorn.xp. and 210/198.2.ccls.) and diol	USPAT	2003/03/12 11:07
-	140	methoxy near7 ligand	USPAT	2003/03/12 11:08
-	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:08
-	883	methoxy same ligand	USPAT	2003/03/12 11:09
-	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:09
-	13	methoxyl same ligand	USPAT	2003/03/12 11:12
-	2547	methoxyl	USPAT	2003/03/12 11:13
-	0	210/198.2.ccls. and methoxyl	USPAT	2003/03/12 11:13
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-	14	210/198.2.ccls. and (alkoxy same ligand)	USPAT	2003/03/12 11:31
-	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
-	6	210/198.2.ccls. and ((ethylene adj glycol) same ligand)	USPAT	2003/03/12 11:39
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-	102535	methoxy	USPAT	2003/03/12 11:13
-	66	210/198.2.ccls. and methoxy	USPAT	2003/03/12 11:29
-	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
-	14	210/198.2.ccls. and (alkoxy same ligand)	USPAT	2003/03/12 11:31
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-	6	210/198.2.ccls. and ((ethylene adj glycol) same ligand)	USPAT	2003/03/12 11:39
-	1688	210/198.2.ccls.	USPAT	2003/03/12 11:44

US-PAT-NO: 5667692  
DOCUMENT-IDENTIFIER: US 5667692 A

TITLE: Method and supports for gel permeation  
chromatography

DATE-ISSUED: September 16, 1997

US-CL-CURRENT: 210/635; 210/198.2 ; 210/502.1 ; 210/656

APPL-NO: 08/ 624476

DATE FILED: July 16, 1996

	FOREIGN-APPL-PRIORITY-DATA:	
COUNTRY	APPL-NO	APPL-DATE
DE	43 34 353.8	October 8, 1993

PCT-DATA:

APPL-NO: PCT/EP94/03197  
DATE-FILED: September 24, 1994  
PUB-NO: WO95/10355  
PUB-DATE: Apr 20, 1995  
371-DATE: Jul 16, 1996  
102(E)-DATE: Jul 16, 1996

----- KWIC -----

Primary Examiner - XP:

Therkorn; Ernest G.

Brief Summary Text - BSTX:

Base supports in the context of the present invention are particles onto which polymers are grafted. Base supports which can be employed are, in general, customary porous or nonporous support particles, provided they have primary or secondary aliphatic hydroxyl groups at their surface or can have aliphatic hydroxyl groups introduced into them by processes which are

known per se.

Particularly suitable base supports are polyvinyl alcohol-based polymers, or copolymers of (meth)acrylate derivatives and comonomers containing aliphatic hydroxyl groups, or diol-modified silica gels or polyvinyl-based copolymers containing aliphatic hydroxyl groups. Such base supports are obtainable commercially; one example is Fractogel.RTM. TKS HW 65 (S) (from E. Merck), a porous vinyl-based copolymer containing aliphatic hydroxyl groups (1 meq of OH/g).

Claims Text - CLTX:

2. The support material of claim 1, wherein the hydroxyl-containing base support is a polyvinyl alcohol polymer, a copolymer of (meth)acrylate with comonomers containing aliphatic hydroxyl groups, a diol-modified silica gel or a polyvinyl copolymer containing aliphatic hydroxyl groups.

Current US Cross Reference Classification - CCXR:

210/198.2

US-PAT-NO: 6074555  
DOCUMENT-IDENTIFIER: US 6074555 A

TITLE: Modified chromatographic support materials

DATE-ISSUED: June 13, 2000

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
502/402

APPL-NO: 08/ 415766

DATE FILED: April 3, 1995

PARENT-CASE:

This application is a continuation of application Ser. No.  
08/111,963 filed  
Aug. 26, 1993, now abandoned, which is a continuation of  
application Ser. No.  
07/943,793 filed Sep. 11, 1992, also abandoned.

	FOREIGN-APPL-PRIORITY-DATA:	
COUNTRY	APPL-NO	APPL-DATE
DE	41 30 475	September 13,
1991		

----- KWIC -----

Primary Examiner - XP:

Therkorn; Ernest G.

Brief Summary Text - BSTX:

These materials are prepared from glycerol-derivatized  
silica gel by, for  
example, chemical bonding of the tripeptide  
glycyl-phenylalanyl-phenylalanine  
via the amino terminus by means of 1,1-carbonyldiimidazole  
to the diol groups  
of the glycerol radical. The phenylalanine residues

located on the outer surface are subsequently eliminated enzymatically; carboxypeptidase A is preferred for the elimination. However, in this case the glycine residues remain essentially bonded to the support. For this reason this support material has negatively charged carboxyl groups on the outer surface and, in particular, also inside the pores (C-terminal phenylalanine). It therefore does not have the required pure reverse phase properties. Furthermore, this cation exchanger property on the outer surface results in unwanted interactions with the sample material.

#### Brief Summary Text - BSTX:

Haginaka et al. (1989) disclose a chromatographic support material in which the hydrophobic phase consists of fatty acid residues in amide linkages. The amide linkage is regarded by the authors as sufficiently stable for the intended use. However, the preparation of the material is more complicated than that of the material according to EP 0 173 233: a specific new enzyme, polymyxin acylase, which is difficult to obtain, is required to remove the fatty acid residues from the outer surfaces. It is not, for example, commercially available. In addition, the enzymatic elimination results in free amino groups which must be converted in an additional reaction into a "diol" phase in order to avoid disturbances.

#### Brief Summary Text - BSTX:

It has been found, surprisingly, that chromatographic support materials of the above types can be prepared by, for example, reacting silica gel particles, which have been modified by known processes with



2,3-dihydroxypropoxy groups  
(--O--CH<sub>2</sub>--CHOH--CH<sub>2</sub> OH; "diol" group), in a  
further step with fatty  
acid derivatives to form an ester linkage. Subsequently,  
the acyl groups on  
the outer surface are eliminated enzymatically using  
esterases and/or lipases.  
Surprisingly, even particle-bound lipase is suitable for  
this reaction. This  
results in stable support materials. This finding is  
surprising in view of the  
technical teaching of Haginaka et al., because the ester  
linkage is even more  
unstable than the amide linkage. The material according to  
the invention is  
easier to prepare compared with the state of art, because  
easily obtainable  
enzymes can be employed, and because the required "diol"  
phase is produced on  
the surface without additional reaction.

Brief Summary Text - BSTX:

It is possible to use porous silicate-containing materials  
as starting  
material, for example silica gels or porous glasses. Large  
numbers of  
materials of these types are commercially available: for  
example Nucleosil.TM.,  
supplied by Macherey & Nagel, Duren; LiChrospher.RTM.,  
supplied by E. Merck,  
Darmstadt; or Controlled-Pore Glass.TM., supplied by  
Electro-Nucleonics Inc.,  
U.S.A.; Bioran.RTM. glass, supplied by Schott, Mainz.  
These materials can be  
converted, for example by known methods, into the  
appropriate "diol" phases,  
i.e. 2,3-dihydroxypropoxy-modified supports (Dean, P. D.  
G., Johnson, W. S.,  
Middle, F. A., Affinity Chromatography, 1985, IRL-Press,  
England).

Brief Summary Text - BSTX:

However, finished "diol" phases which can be employed  
according to the

invention as hydrophilic supports are also commercially available; for example LiChrospher.RTM. diol (supplied by E. Merck, Darmstadt).

Brief Summary Text - BSTX:

According to the invention, esterification is accomplished on aliphatic hydroxyl groups, not on, e.g., silanol groups. Therefore, "diol" derivatization or introduction of aliphatic hydroxyl groups is necessary unless the base material contains already aliphatic hydroxyl groups. Any aliphatic hydroxyl group could be used as an alcohol moiety for forming the C.sub.2 -C.sub.10 alkyl having 1-9 aliphatic hydroxyl groups. A preferred range would be C.sub.2 -C.sub.6 alkyl having 1-5 aliphatic hydroxyl groups, e.g., 2-hydroxyethoxy-, 2-hydroxypropoxy-, 3-hydroxypropoxy-, 2,3-dihydroxypropoxy-, 4-hydroxy-n-butoxy-, 3-hydroxy-n-butoxy-, 3,4-dihydroxy-n-butoxy-, 2,3-dihydroxy-n-butoxy-, 2,3,4-trihydroxy-n-butoxy-, especially preferred is 2,3-dihydroxypropoxy-.

Brief Summary Text - BSTX:

Suitable for introducing the aliphatic hydroxyl groups are mono-, di- and trifunctional silanes as well as mixtures thereof. A silica gel support with homogeneous distribution of silanol groups on the surface, which has been reacted with mono- and/or difunctional silanes to give the corresponding "diol" phase, is preferred. Preferred as starting material for the subsequent reaction are materials which contain silanol groups (silica gels, porous glasses) and which have 2-6  $\mu\text{mol}/\text{m}^2$ , preferably 2.5-3.5  $\mu\text{mol}/\text{m}^2$ , "diol" groups on the phase surface.

Brief Summary Text - BSTX:

This involves the primary and/or secondary hydroxyl group of the immobilized glycerol radical ("diol" radical) forming the corresponding ester with the halide in a known manner.

Brief Summary Text - BSTX:

The reaction of the "diol"-containing support materials with the fatty acid halides described is carried out with a 4- to 10-fold, preferably 8- to 9-fold, excess of chloride based on the "diol" content of the materials employed. The reaction is normally carried out in the presence of 1 to 3 equivalents of an organic base, preferably 1.5 equivalents of triethylamine, in an anhydrous solvent, for example chloroform. After dropwise addition of the cooled halide at 0-10.degree. C., preferably 4.degree. C., the mixture is left to react at 20-25.degree. C. for 12 to 15 hours. The resulting material is filtered off, washed several times with chloroform, methanol, water and subsequently again with methanol and dried.

Brief Summary Text - BSTX:

The C.sub.4 -, C.sub.8 - and C.sub.18 -fatty acid ligands which are preferably used occupy between 60 and 90%, preferably 80%, of the surface, based on the "diol" content of the starting material in each case.

Detailed Description Text - DETX:

1.2. Ring Opening to Give the "Diol" Phase

Detailed Description Text - DETX:

A diol-modified silica gel with a covering of 2.79  
.mu.mol/m.sup.2 (calculated  
from the content of 7.0% C).

Current US Original Classification - CCOR:

210/198.2

US-PAT-NO: 5830999

DOCUMENT-IDENTIFIER: US 5830999 A

TITLE: Stabilization of insulin through ligand binding interactions

DATE-ISSUED: November 3, 1998

US-CL-CURRENT: 530/303; 530/304 ; 530/305

APPL-NO: 08/ 378412

DATE FILED: January 26, 1995

----- KWIC -----

Detailed Description Text - DETX:

Pursuant to another aspect of the present invention, electron releasing groups that increase the density of negative charge on the carboxylate group and thus increase the affinity of the organic carboxylate ligand for the HisB10 metal ion may also suitably be incorporated. Suitable electron releasing groups include, but are not limited to, the following: hydroxylate anion, thiolate anion, hydroxyl, methoxyl, amino and alkyl.

US-PAT-NO: 6117996

DOCUMENT-IDENTIFIER: US 6117996 A

TITLE: Triazine based ligands and use thereof

DATE-ISSUED: September 12, 2000

US-CL-CURRENT: 544/216; 210/198.2 ; 544/215

APPL-NO: 09/ 071927

DATE FILED: May 1, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part of application Ser. No. 08/849,502 filed on Jun. 5, 1997 which claims the benefit of application Ser. No. PCT/DK96/00399 filed on Sep. 19, 1996 via the PCT and claims priority under 35 U.S.C. 119 of Great Britain application 9519197.9 filed Sep. 20, 1995, and of Danish application serial no. 0399/98 filed Mar. 20, 1998, the contents of which are fully incorporated herein by reference. This application is a C.I.P. of 08/849,502 filed Jun. 5, 1997 abandoned which is a continuation of PCT/DK96/00399 filed Sep. 19, 1996.

FOREIGN-APPL-PRIORITY-DATA:		
COUNTRY	APPL-NO	APPL-DATE
GB	9519197	September 20,
1995		
DK	0399/98	March 20, 1998

----- KWIC -----

Brief Summary Text - BSTX:

The term "alkoxy group containing from 1 to 6 carbon atoms"

as used herein,  
alone or in combination, refers to a straight or branched  
monovalent  
substituent comprising an alkyl group containing from 1 to  
6 carbon atoms  
linked through an ether oxygen having its free valence bond  
from the ether  
oxygen and having 1 to 6 carbon atoms e.g. methoxy, ethoxy,  
propoxy,  
isopropoxy, butoxy, pentoxy.

Current US Cross Reference Classification - CCXR:

210/198.2

US-PAT-NO: 5110784

DOCUMENT-IDENTIFIER: US 5110784 A

TITLE: Dual surface porous material

DATE-ISSUED: May 5, 1992

US-CL-CURRENT: 502/401; 210/198.2 ; 210/198.3 ; 210/656 ;  
252/184 ; 427/387  
; 428/405 ; 428/447 ; 428/502 ; 502/402

APPL-NO: 07/ 479133

DATE FILED: February 12, 1990

PARENT-CASE:

This is a continuation in part of application Ser. No. 154,754, filed Feb. 11, 1988, now abandoned, which is a continuation in part of application Ser. No. 901,349, filed Aug. 28, 1986, now abandoned, which is a continuation of application Ser. No. 736,030 filed May 20, 1985, now abandoned, which is a continuation of Ser. No. 598,091, filed Apr. 9, 1984, now abandoned.

----- KWIC -----

Detailed Description Text - DETX:

The following two examples of mixed phase compositions showed negligible dual zone character. They were made by attaching a substoichiometric amount of the residue CF.sub.3 CH.sub.2 CH.sub.2 (CH.sub.3).sub.2 Si-- (hereinafter TFS) to silica gel followed by saturating the remaining reactable surface hydroxyls with (CH.sub.3).sub.3 Si-- (hereinafter TMS) residue. The first residue was attached using the chlorosilane derivative. Chlorosilanes



are common  
silylating agents that are known to be more reactive than  
organosilanols or the  
silanol precursors (silyl methoxy derivatives) set forth in  
Abbott's patent.

The silica gels had pore diameters of 6 nM (Baker Silica  
Gel as was used in the  
examples of the instant invention disclosure), and 25 nM  
(Amicon Brand Silica),  
but in neither case was a substantial amount of dual zone  
character displayed.  
When these residues are attached to such silica in amounts  
comparable to the  
below samples using ultrafast silylating agents and  
conditions under which the  
agent is not completely converted to a slower agent, then  
substantial dual zone  
character meeting the criteria of (a) and/or (b), is  
obtained.

Current US Cross Reference Classification - CCXR:

210/198.2

US-PAT-NO: 4828695  
DOCUMENT-IDENTIFIER: US 4828695 A

TITLE: Packaging material for high pressure liquid  
chromatography and method  
of making the same

DATE-ISSUED: May 9, 1989

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
428/403 ; 428/406  
; 428/407 ; 502/401 ; 502/439

APPL-NO: 07/ 154581

DATE FILED: February 10, 1988

FOREIGN-APPL-PRIORITY-DATA:		
COUNTRY	APPL-NO	APPL-DATE
JP	62-44445	February 26,
1987		

----- KWIC -----

Detailed Description Text - DETX:

The organic silane compound used herein is, for example,  
the compound having  
the following general formula: ##STR1## in which R.sub.1 is  
epoxy group,  
R.sub.2 is a member selected from the group consisting of  
epoxy, methoxy,  
ethoxy, methyl and ethyl groups and halogen atom, X is a  
member selected from  
the group consisting of methoxy, ethoxy, methyl and ethyl  
groups and halogen  
atom, and Y is a member selected from the group consisting  
of methoxy and  
ethoxy groups and halogen atom. Concretely as typical  
silane compound,  
.gamma.-glycidoxypropyl trimethoxysilane,  
.gamma.-glycidoxypropyl  
triethoxysilane, .gamma.-glycidoxypropyl monomethyl

dichlorosilane,  
.gamma.-glycidoxypropyl dimethyl monochlorosilane,  
3,4-epoxybutane monomethyl  
dichlorosilane, 3,4-epoxybutane triethoxysilane or  
di-.gamma.-glycidoxypropyl  
dichlorosilane is exemplified.

Claims Text - CLTX:

4. A packing material as set forth in claim 1, in which the organic silane compound is the following general formula: ##STR2## in which R.sub.1 is epoxy group, R.sub.2 is a member selected from the group consisting of epoxy, methoxy, ethoxy, methyl and ethyl groups and halogen atom, X is a member selected from the group consisting of methoxy, ethoxy, methyl and ethyl groups and halogen atom, and Y is a member selected from the group consisting of methoxy and ethoxy groups and halogen atom.

Current US Original Classification - CCOR:

210/198.2

US-PAT-NO: 6117996

DOCUMENT-IDENTIFIER: US 6117996 A

TITLE: Triazine based ligands and use thereof

DATE-ISSUED: September 12, 2000

US-CL-CURRENT: 544/216; 210/198.2 ; 544/215

APPL-NO: 09/ 071927

DATE FILED: May 1, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part of application Ser. No. 08/849,502 filed on Jun. 5, 1997 which claims the benefit of application Ser. No. PCT/DK96/00399 filed on Sep. 19, 1996 via the PCT and claims priority under 35 U.S.C. 119 of Great Britain application 9519197.9 filed Sep. 20, 1995, and of Danish application serial no. 0399/98 filed Mar. 20, 1998, the contents of which are fully incorporated herein by reference. This application is a C.I.P. of 08/849,502 filed Jun. 5, 1997 abandoned which is a continuation of PCT/DK96/00399 filed Sep. 19, 1996.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
GB	9519197	September 20,
1995		
DK	0399/98	March 20, 1998

----- KWIC -----

Claims Text - CLTX:

1. Affinity ligand-matrix conjugates comprising a ligand

with the general  
formula (a): ##STR20## wherein R.sub.1 represents a  
hydrogen atom, an alkyl  
group containing from 1 to 6 carbon atoms, a hydroxyalkyl  
group containing from  
1 to 6 carbon atoms, a cyclohexyl group, an amino group, a  
phenyl group,  
naphthyl group, 1-phenylpyrazole, indazole, benzthiazole  
group, benzoxazole  
group or a benzimidazole group, each of which benzene,  
naphthalene,  
1-phenylpyrazole, indazole, benzthiazole, benzoxazole or  
benzimidazole ring is  
optionally substituted with one or more substituents  
independently selected  
from the group consisting of alkyl groups containing from 1  
to 6 carbon atoms,  
alkoxy groups containing from 1 to 6 carbon atoms, acyloxy  
or acylamino groups  
containing from 1 to 6 carbon atoms, amino groups, hydroxyl  
groups, carboxylic  
acid groups, sulphonic acid groups, carbamoyl groups,  
sulphamoyl groups,  
alkylsulphonyl groups containing from 1 to 6 carbon atoms  
and halogen atoms;

Current US Cross Reference Classification - CCXR:

210/198.2

US-PAT-NO: 5876595

DOCUMENT-IDENTIFIER: US 5876595 A

TITLE: Adsorption medium and method of preparing same

DATE-ISSUED: March 2, 1999

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
502/402

APPL-NO: 08/ 821892

DATE FILED: March 21, 1997

PARENT-CASE:

This is a division of application Ser. No. 08/585,369  
filed Jan. 11, 1996,  
now U.S. Pat. No. 5,667,674.

----- KWIC -----

Brief Summary Text - BSTX:

Preferred silanes feature three olefinic groups having the  
formula

--(CH.sub.2).sub.m CH.dbd.CH.sub.2, where m is between 0  
and 3, inclusive.

Particularly preferred are olefinic groups having the  
formula --CH.sub.2

CH.dbd.CH.sub.2 (m=1) and --CH.dbd.CH.sub.2 (m=0).

Examples of preferred

ligands include hydrogen, a halogen (e.g., F, Cl, Br, or  
I), an alkoxy group

(e.g., having between 1 and 3 carbon atoms, inclusive, such  
as a methoxy or

ethoxy group), an aryl group (e.g., a phenyl or naphthyl  
group), a derivatized

aryl group (e.g., an aminoaryl, haloaryl, hydroxyaryl,  
mercaptoaryl, cyanoaryl,

phosphonoaryl, or carboxyaryl group having between 1 and 18  
carbon atoms,

inclusive), an alkyl group (e.g., having between 1 and 22

carbon atoms, inclusive, such as an octyl or octadecyl group), or a derivatized alkyl group (e.g., an aminoalkyl, haloalkyl, hydroxyalkyl, mercaptoalkyl, cyanoalkyl, phosphonoalkyl, or carboxyalkyl group having between 1 and 18 carbon atoms, inclusive). Other examples of derivatized alkyl and aryl groups include alkyl or aryl-bound cyclodextrans, crown ethers, and chiral molecules. Specific examples of preferred silanes include triallyloctadecylsilane, trivinyloctadecylsilane, triallyloctylsilane, and trivinyloctylsilane.

Claims Text - CLTX:

5. The method according to claim 1 comprising contacting the substrate with a silane in which the ligand comprises hydrogen, a halogen, an alkoxy group, an aryl group, a derivatized aryl group, an alkyl group, or a derivatized alkyl group.

Current US Original Classification - CCOR:

210/198.2

US-PAT-NO: 5045190  
DOCUMENT-IDENTIFIER: US 5045190 A

TITLE: Chromatography apparatus

DATE-ISSUED: September 3, 1991

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
502/402 ; 502/403

APPL-NO: 07/ 578888

DATE FILED: September 5, 1990

PARENT-CASE:

RELATED APPLICATIONS This application is a continuation-in-part of application Ser. No. 07/268,811, filed on Nov. 8, 1988, which is a continuation-in-part application of pending prior application Ser. No. 07/119,020 filed on Nov. 10, 1987, both now abandoned.

----- KWIC -----

Detailed Description Text - DETX:

Preferably, however, the polar group is a polyalkoxy group having at least 2 alkoxy groups selected from the class consisting of ethoxy and isopropoxy. Broadly speaking, the polyalkoxy group will have not more than 50 alkoxy groups. Preferably, however, the polyalkoxy group will have from 5 to 30 alkoxy groups therein. A ligand can be substituted for the hydroxyl group at one end of the polyalkoxy group and a hydrophobic functional group substituted for the hydroxyl group at the other end of the polyalkoxy group by known procedures. Minor substitutions to polyalkoxy groups which



do not  
substantially affect the polarity of the polyalkoxy groups  
produce equivalent  
compounds for purposes of this invention. Fluorinated  
polyalkoxy groups are  
exemplary of such equivalent compounds.

Current US Original Classification - CCOR:

210/198.2